Profile Summary

Dynamic AI specialist and software Tester with hands-on experience in designing and executing robust testing methodologies to ensure software quality and reliability. Holding a solid academic foundation, a BSc with Honors in Computer Science and an MSc in Artificial Intelligence. Passionate about harnessing AI and machine learning to optimize software development processes and enhance operational efficiency. Proven ability to conceptualize and deliver end-to-end software projects while collaborating effectively with cross-functional teams. Driven by a commitment to continuous learning, research, innovation, and creating impactful, data-driven solutions that meet and exceed industry standards. Deeply passionate about research, constantly exploring new frontiers in AI and its applications to drive meaningful advancements.

KEY SKILLS & KNOWLEDGE

1. **AI and Machine Learning:** Autonomous Systems, Deep Learning (RNNs, CNNs, Transformers), Generative Models, Reinforcement Learning, TensorFlow, Keras, PyTorch.
2. **Programming & Web Development:** Python (Advanced), Java, HTML, CSS, JavaScript, PHP, MATLAB, APIs, Flask, Django.
3. **Technical Tools:** Git, GitHub, technical documentation and reporting, VS Code, .NET, Jupyter Notebook.
4. **Software Testing:** Unit, Integration, Functional, Compatibility, Sanity, Performance, JMeter
5. **Data & Analytics:** NumPy, Pandas, Clustering, Regression, Power BI, Tableau.
6. **Policy & Communication:** Briefing notes, technical writing, Public affairs insight, Stakeholder communication.
7. **Collaboration & Delivery:** Agile methodology, Cross-functional teamwork, Time management, attention to detail
8. **Research and Computer Vision:** Strong Academic and independent research in AI and Ethics; object recognition and video inference techniques.
9. **IoT & Emerging Tech:** Applied understanding of IoT in academic and practical settings.
10. **Personal Strengths:** Self-starter, fast learner, attention to detail, strong communicator, proactive team player.

WORK EXPERIENCE

Trainee Software Tester (Internship)

Hi Tech Plus, London | Sept 2022 – Mar 2023

- Designed and executed test scenarios for new software updates, ensuring product integrity and functionality.
- Collaborated with development teams to identify and resolve critical bugs, improving software stability by 15%.
- Produced detailed reports on testing outcomes, providing actionable feedback to enhance product performance.
- Implemented risk-based testing techniques to prioritize high-impact areas, contributing to the reduction of post-release defects.
- Executed various tests that included Unit tests, Integrated testing, Compatibility testing, Integration testing Functional testing, Sanity testing, and JMeter testing.

Key Achievement: Successfully identified critical vulnerabilities early in the development cycle, reducing the number of bugs in the final product by 20%.

RELEVANT EXPERIENCE & PROJECTS (Available on my GitHub)

A collection of my AI, software development, and data analysis projects can be found on my GitHub and personal website. These projects showcase my work in machine learning, AI planning, software testing, and full-stack development, demonstrating my ability to design, implement, and analyse intelligent systems.

Current Research/Projects:

- **Autonomous Factory-"Auto Factory":** Developing an 85-95% autonomous factory called "Auto-factory" that leverages AI-driven automation, optimization, and decision-making to enhance industrial efficiency and sustainability.
- **AI in Warfare:** Investigating the application of artificial intelligence in military strategy to minimize casualties while maximizing operational effectiveness, focusing on ethical and precision-based AI interventions.

Education

MSc Artificial Intelligence

Royal Holloway University of London

- **Relevant Modules**: Deep Learning, Autonomous Systems, Data Analysis, BI Systems, Ethics in Artificial Intelligence, Formal Verification.
- **Project**: Exploring Satisfiability Modulo Theories and Bounded Model Checking in AI Planning.

BSC Computer Science with Honors

Oxford Brookes University

- **Relevant Modules:** Artificial Intelligence, Machine Learning, Game Development, DevOps, Databases, Internet of Things, Principles of Secure Operating Systems, Software Engineering, Advanced OOP, WebApp.
- **Final Year Project:** Predictive Modelling for malaria outbreaks using logistic regression and clustering techniques.

Achievements

- **University Agile Project:** Successfully developed a mobile application focused on student well-being, aimed at addressing the growing mental health crisis among university students. Led the project from ideation to prototype stage, utilizing Agile methodologies.

- **Built a personal website:** Successful developed/built a personal website as a hub for my **CV, portfolio, research, and blogs** on AI, software development, and innovation. Explore my latest projects, insights, and breakthroughs in artificial intelligence. Stay updated and connect with me at [https://www.boris-roy.com/].

Interests

- AI research, Autonomous Systems, Neural Networks, Data Analysis, Ethical AI development.